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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/603,515	06/23/2000	Andrew P. Foray	P/3879-12	9913

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EXAMINER
KARMIS, STEFANOS

ART UNIT	PAPER NUMBER
3624	

DATE MAILED: 11/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/603,515	FORAY ET AL.	
	Examiner	Art Unit	
	Stefano Karmis	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *11/20/2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) *9 and 23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This application has been reviewed. Original claims 1-24 are pending. The objections and rejections cited are as stated below:

Claim Objections

2. Claim 23 is objected to because of the following informalities: Line 24, spelling mistake, "one" should replace "on". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1, 5-13, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Togher et al. US Pat. No. 6,014,627 (hereinafter Togher).

6. Claims 1 and 24, Togher teaches a method and system for "anonymous trading that can identify the best bids and offers from those counterparties with which each client site is currently eligible to deal...(column 2, lines 16-18). Buying and selling is facilitated through a communication network (column 4, lines 66-67).

An arbitrator node is used to identify potential matches between buyers and sellers (column 5, lines 19-20). There are a plurality of arbitrators acting as matching engines that are connected to the communication network, each arbitrator is connected to the other plurality of arbitrators and also having means to a market distributor as well as trader terminals (Figure 1). The market distributors, which relay current market data (column 5, lines 11-12) are preferably supplemented by the arbitrator node performing criteria for matching buyers and sellers (column 5, lines 18-21). The permanent communication link between arbitrators allows for them to distribute price quotes to other devices so that traders in various regions can get price messages (column 5, 47-49).

Togher teaches that the arbitrators can perform a match independently while other arbitrators are simultaneously processing deals. In a passive mode, the arbitrators can provide price quotes to trader terminal from different Trade Regions (column 5, lines 40-50).

Togher fails to teach a system where at least one arbitrator remains in a passive mode. Official Notice is taken. It would be obvious to anyone of ordinary skill in the art that if the arbitrators work independently, the communication link could be modified so that only one or all

of the arbitrators may be executing matching functions while active or communicating price messaging to trader terminals in a passive state. This allows for maximum versatility of the matching engines in the networking environment.

Togher teach a networking environment for communication in anonymous trading comprising of trader terminals, market access nodes, market distributors and arbitrators (matching engine).

Claim 5, Togher teaches a communication network where the matching engines are arranged as a clique (figure 1).

Claims 6 and 7, the workstations on the trader floor are each connected to a market access node and each market access node is connected to at least one of a plurality of arbitrators acting as matching engines (figure 1). The market access nodes maintain "transaction records, credit limits, and other confidential information originating with its associated Trading Floor" (column 5, lines 6-8).

Claim 9, the market access nodes are each connected to trader terminals throughout each branch of the network. The access nodes are responsible for "distributing market information" (column 2, lines 44-45) to the trader terminals.

Claim 10, the matching engines processes deals (column 5, line 42), it is preferable able to "automatch" a bid price (column 7, line 8) and they broadcast price quotes to traders through the communication network (column 5, lines 48-49).

Claim 11, "it is preferable to have more than one arbitrator, with each arbitrator having primary responsibility for trades initiated by Market Makers in the arbitrator's own Trading

Region, and being connected to all the market access nodes and market distributors of the Trading Region as well as to the other arbitrators in other trading regions...(column 5, lines 31-36).

Claim 13, the matching engines provide an efficient communication network for broadcasting price quotes to all traders in other Trading Regions (column 5, lines 48-49).

Claim 21 and 22, each workstation acts as a trader terminal (figure 1) and supports a single trader trading in a single currency pair (column 6, lines 41-42).

Claim 8, Togher teaches multiple market distributors that are connected in a communication network (figure 1). The market distributors are indirectly connected to other market distributors throughout the communication network.

Togher fails to teach a market distributor on the network between an existing market distributor and a trader terminal, thus having two market distributors in direct connection. Official Notice is taken. At the time of the invention it would have been obvious to anyone of ordinary skill in the art that additional market distributors nodes may be connected to the communication network in various locations.

Claims 12 and 23, Togher teaches a method and system for "anonymous trading that can identify the best bids and offers from those counterparties with which each client site is currently eligible to deal...(column 2, lines 16-18).

A plurality of workstations are each connected to the communication network (figure1). Each workstation having a display that contains "information which a typical trader would consider essential to trading..." (column 6, lines 41-44).

An arbitrator node is used to identify potential matches between buyers and sellers (column 5, lines 19-20) as well as to communicate with trade terminals items such as price quotes (column 5, lines 47-49). There are a plurality of arbitrators acting as matching engines that are connected to the communication network, each arbitrator is connected to the other plurality of arbitrators and also having means to a market distributor as well as trader terminals (Figure 1). The market distributors, which relay current market data (column 5, lines 11-12) are preferably supplemented by the arbitrator node performing criteria for matching buyers and sellers (column 5, lines 18-21) and for processing deals (column 5, line 42).

Togher teaches that the arbitrators can perform a match independently while other arbitrators are simultaneously processing deals. In a passive mode, the arbitrators can provide price quotes from different Trade Regions (column 5, lines 40-50).

Togher fails to teach a system where at least one arbitrator remains in a passive mode. Official Notice is taken. It would be obvious to anyone of ordinary skill in the art that if the arbitrators work independently, the communication link could be modified so that only one or all of the arbitrators may be executing matching functions while active or communicating price messaging to trader terminals in a passive state.

7. Claims 2-4 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Togher et al. US Pat. No. 6,014,627 (hereinafter Togher) in view of Hartmann US Pat. No. 5,537,468.

Claims 17 and 18, Togher teaches a system with the use of "logical links" to ensure that messages sent in a certain order are guaranteed to reach their destination in the same order. "The communication network is preferably provided with sufficient error detection, error correction, and network self-repair capabilities to guarantee that messages sent via these logical links are error free" (column 6, lines 1-11).

Togher fails to teach a switching mechanism to allow for certain matching engines to be active while others are passive.

Hartmann teaches a switching means for routing excessive traffic in a networking environment to distribute load balance to increase network performance.

Claims 2 and 14, "the traffic load condition of an alternate route is graded by means of the buys/idle state..." thus causing the switching node to alter traffic flow to alternate nodes so that traffic can be balanced (column 2, lines 47-56).

Claims 3, 4, 15, and 16, it would be obvious to anyone of ordinary skill in the art that switching techniques due to load balancing taught by Hartmann (column 1, lines 47-50) can be applied to switch between different matching engines in an anonymous trading environment based on other criterion such as: price quotes, number of price messages, market conditions, volume of trading instructions, or any other criteria of the like.

Therefore, it would have been obvious to combine Togher with Hartmann to obtain the invention as specified in claims 2-4 and 14-18.

8. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Togher et al. US Pat. No. 6,014,627 (hereinafter Togher) in view of Hartmann US Pat. No. 5,537,468 in further view of Geffrotin US Pat. No. 5,146,499.

Togher teaches the manner in which matching engines interact with one another when information from one matching engine is transferred to an alternate matching engine on the communication network.

Hartmann teaches a switching means for routing excessive traffic in a networking environment to distribute load balance to increase network performance.

Claim 19, Togher, "whether the links between nodes are permanent or temporary they are preferably "logical links" which have the property that messages sent in a certain order over the same logical link are guaranteed to reach their destination in the same order (column 6, lines, 1-7).

Togher and Hartmann fail to teach an authentification method to verify the information being sent over the network.

Geffrotin teaches the use of number sequences for authentification in a data processing system.

Claim 20, Geffrotin, "authentification procedure based on a reversible algorithm (ALG, ALG-1), which makes use of said random number RN, for establishing in addition to the identification of a holder" (column 2, lines 30-33).

Therefore, it would have been obvious to combine Togher and Hartmann with Geffrotin to obtain the invention as specified in claims 19 and 20.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Silverman et al. US Patent 5,136,501 Aug. 4, 1992. Anonymous Matching System.

b) Ordish et al. US Patent 5,727,165 Mar. 10, 1998. Offer Matching System Having Timed Match Acknowledgement.

c) Luke et al. US Patent 6,131,087 Oct. 10, 2000. Method for Automatically Identifying, Matching, and Near-Matching Buyers and Sellers in Electronic Market Transactions.

d) Howorka US Patent 6,282,521 Aug. 28, 2001. Anonymous Trading System With Improved Quote Input Capabilities.

e) Kim et al. US Patent 6,359,885 Mar. 19, 2002. Multi-Channel Packet Switching Apparatus Having Traffic Flow Controlling and Checking Functions.

f) Bare US Patent 6,473,403 Oct. 29, 2002. Identify Negotiation Switch Protocol.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefano Karmis whose telephone number is (703) 305-8130. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on (703) 308-1065. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-1113.

Respectfully Submitted
Stefano Karmis
November 26, 2002

HANI M. KAZIMI
PRIMARY EXAMINER